



## ● Information Technology Strategic Plan (ITSP) - Quarterly Report for the period ending September 2010

### Summary

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This report provides a quarterly update on progress to implement Metropolitan’s Information Technology Strategic Plan (ITSP) and on information technology (IT) activities in general for the period ending September 30, 2010. There were a number of important milestones achieved during the period that are summarized in this report. Key milestones for the upcoming quarter ending December 31, 2010 include rollout of the new Computer-Aided Design Management System, deployment of the Enterprise Learning Management System (My Learning), and completing database upgrades for the Supervisory Control and Data Acquisition system.

The ITSP provides a roadmap to guide the investment and deployment of information technology at Metropolitan over the next three to five years. The plan is updated periodically updated in light of changing business needs and technologies. The goal of the plan is to leverage information technology investments to increase long-term reliability, while improving Metropolitan’s overall efficiency and effectiveness. Oversight of IT investments is provided by the IT Guidance Committee consisting of senior management and the Capital Investment Plan (CIP) Evaluation Team as part of the annual CIP planning process.

### Detailed Report

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Attached are highlights of progress and major milestones reached on IT projects / initiatives during the period of July 1 through September 30, 2010. The projects are categorized by business driver as follows:



#### IT STRATEGIC PLAN


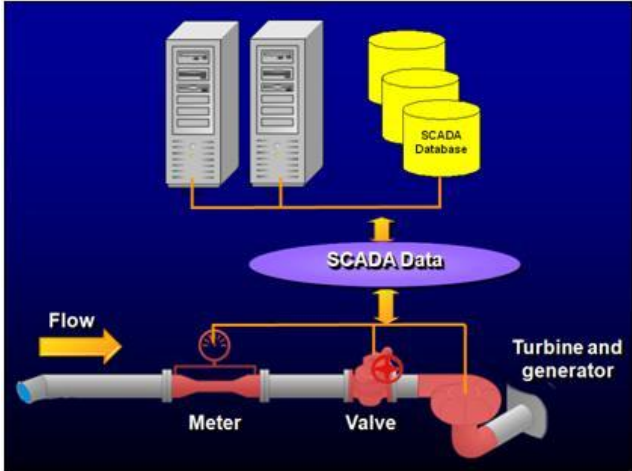

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**Enhanced Reliability** – Enhance system reliability

**Improved Water Quality** – Ensure water quality excellence

**Enhanced Cyber Security** – Effectively manage and safeguard assets

**Productivity / Cost Efficiency** – Improve process efficiency and effectiveness

<p style="text-align: center;"><b>Enhanced Reliability:</b></p>	<p style="text-align: center;"><b>Fiscal Year 2010-11</b>  <b>Budget: \$ 2.52 M      Expended: \$ 0.83 M</b></p>
<p><b>Key Accomplishments Included:</b></p> <p><b>Conducted SCADA Database Upgrades</b></p> <ul style="list-style-type: none"> <li>▪ The Supervisory Control and Data Acquisition (SCADA) system is used by Water System Operations to monitor and control key water processes within Metropolitan’s conveyance, treatment and distribution system. The SCADA system captures important operational information from the thousands of sensors, monitors, and field instrumentations located throughout Metropolitan’s service area. Examples of the types of data stored in the SCADA databases include flow rate, pressure, temperature, valve position (open/partial/closed), pump state (on/off), and large amounts of water quality readings (e.g. turbidity, pH, etc.). This information is a critical part of Metropolitan’s legal and regulatory compliance.</li> <li>▪ As part of on-going maintenance, IT staff is updating the version of all SCADA database software (Oracle) to ensure system reliability by keeping the software version current. To date, the SCADA database version upgrades have been successfully completed at the Desert facilities, the Skinner and Weymouth Treatment Plants, and Metropolitan’s Oxidation Demonstration Plant located in La Verne. As part of this initiative, upgrades are needed at four remaining sites, which are scheduled to be completed by the end of December 2010.</li> </ul> <p><b>Continued IT Emergency Preparedness &amp; Training</b></p> <ul style="list-style-type: none"> <li>▪ As part of an ongoing effort to refine Metropolitan’s ability to recover critical business processes in the event of a disaster, staff conducted Disaster Recovery exercises in August designed around Metropolitan’s annual data center electrical system shutdown at Union Station Headquarters. The exercise objectives were successfully achieved and included: <ul style="list-style-type: none"> <li>▪ Validating the ability to automatically switch Metropolitan’s website from running on servers in the main data center to operating on servers in Metropolitan’s disaster recovery facility.</li> </ul> </li> </ul>	<div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div>

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- Validating the ability to successfully run the Labsheet application from Metropolitan's disaster facility rather than its main data center.
- Exercising recovery procedures contained in the IT Disaster Recovery Plan and Procedures Guide.
- The Information Technology Section complied with Federal Emergency Management Agency (FEMA) training requirements, as key members of Metropolitan's IT Incident Management and Recovery Teams successfully completed the required courses on the use of the National Incident Management System (NIMS). NIMS provides a systematic, proactive standard approach to guide organizations in responding to and recovering from incidents.


**Began Data Migration for the Enterprise Learning Management (My Learning)**

- The implementation of Metropolitan's new learning management system ("My Learning") is scheduled for implementation in the second quarter of fiscal year 2010/11. My Learning will allow Metropolitan employees to:
  - Identify training requirements
  - View and enroll in available training
  - Take on-line training classes
  - View training history
  - Run and print training related reports
  - Be notified when regulatory compliance training is required for courses such as: hazardous materials (asbestos awareness and lead in construction), defensive driving, sexual harassment prevention, and high rise training
- During the period, IT worked closely with Human Resources staff to begin the migration of historical employee training data into the new system. The implementation is scheduled to be completed by December 2010.

**Completed Computer-Aided Design (CAD) Management System pilot**

- The CAD Management project will implement a system to effectively manage the production of engineering design drawings, specifications and calculations by storing them in a secure

<b>IT Alert</b>
Description
Annual Shutdown of Building Power at Union Station
Start/End
Start: Friday, August 27, 2010 6:00 PM
End: Sunday, August 29, 2010 4:00 PM



**Information Technology Section  
BSDR Technical Recovery Procedures**


*Emergency Management Institute*



**FEMA**  
**JOHN A. DOE**

has straddled through completion of the Emergency Management Institute's Professional Development Series a commitment to Standards of Excellence in Emergency Management.


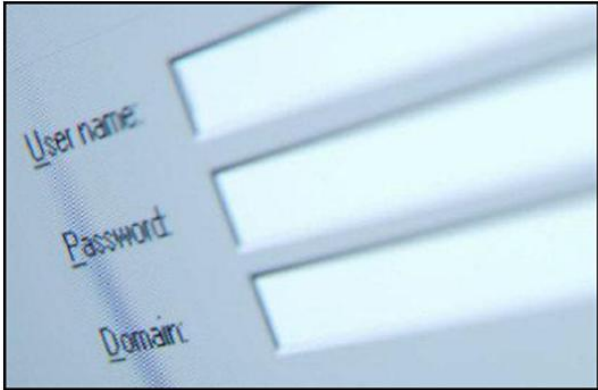
**Certificate of Achievement**  
June 30, 2010



**THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA**

**Date:** September 22, 2010  
**To:** All Metropolitan Employees  
**From:** Fidencio M. Mares, Director of Human Resources  
**Subject:** Introducing My Learning

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<p>repository, managing check-in, check-out and version control of electronic files; automatically creating electronic file backups; and providing advanced search features to facilitate retrieval.</p> <ul style="list-style-type: none"> <li>During the period, staff successfully completed a pilot to validate that the system functions properly and meets all the user requirements prior to full deployment. Staff is now conducting final preparations for rollout of the new Computer-Aided Design Management System in November.</li> </ul> <p>Expenditures in the Enhanced Reliability category were lower than planned for fiscal year 2010/11. The fiscal year variance between planned and expended dollars is primarily due to the deferral of the Data Center Sustainability project and the Oracle Financial Upgrade project.</p>	
<p><b>Enhanced Cyber Security:</b></p>	<p><b>Fiscal Year 2010-11</b>  <b>Budget: \$0.11 M      Expended: \$0.01 M</b></p>
<p><b>Key Accomplishments Included:</b></p> <p><b>Initiated procurement of Encryption Software</b></p> <ul style="list-style-type: none"> <li>During the period, staff obtained approval to proceed with the procurement and implementation of laptop encryption software. The decision was based on an earlier pilot that was successfully completed. The deployment of the security software will provide safeguards to protect sensitive data stored on laptop hard drives in the event the devices are lost or stolen.</li> </ul> <p><b>On-going Cyber Security Monitoring and Controls</b></p> <ul style="list-style-type: none"> <li>Information Technology Security utilizes a complement of security software tools and related methods to proactively protect Metropolitan's cyber assets. Examples of security-related activities include:             <ul style="list-style-type: none"> <li>Constantly monitoring network traffic for suspicious activities</li> <li>Continuously monitoring and protecting against potentially harmful emails (SPAM)</li> <li>Regularly deploying the latest security patches to protect Metropolitan's network, infrastructure and data</li> <li>Utilizing a security analyzer to search the network for potential vulnerabilities</li> </ul> </li> </ul>	

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**Other Key Accomplishments:**

- As part of Metropolitan's security awareness program, IT's Information Security Manager gave a presentation to staff on Computer & Internet Security as part of Metropolitan's Technical Brown Bag Series. The presentation, "What you need to Know & Why," was well attended.
- Staff continued to monitor and participate in national efforts aimed at enhancing security capabilities for water utilities to ensure that Metropolitan meets or exceeds national standards.
- As part of the ongoing security awareness effort, staff published monthly cyber security tips on Metropolitan's internal website providing practical information on current security related issues.
- In addition, staff continued to provide IT security orientation for all Metropolitan new hires.

Expenditures in the Enhanced Cyber Security category were lower than planned for fiscal year 2010/11. The variance stems from a slight deferral of Phase III of the Information Security Remediation Initiative to focus available resources on completing Phase II. Phase III is now scheduled to be recommended to the Board for approval in the first quarter of 2011.



**Improved Water Quality:**

**Fiscal Year 2010-11**  
**Budget: \$0.23 M      Expended: \$0.23 M**

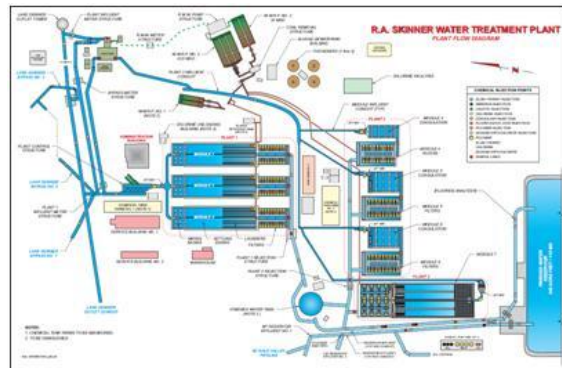
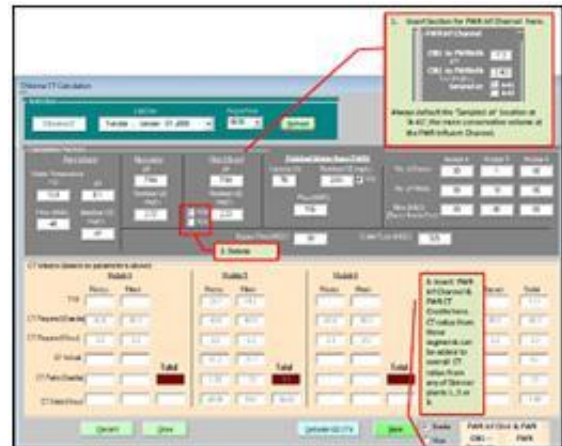
**Key Accomplishments Included:**

**Enhanced Water Quality Labsheet Application**

- The Labsheet Application is used to record water quality analysis results and operational data from the treatment plants, and performs calculations that indicate the level of disinfection being achieved with ozone, chlorine and chloramines. The application stores the information in a database, alerts users when data values are outside of normal, and provides reports for Water System Operations.
- During the period, software enhancements were made to the application to track ozone and reservoir inlet disinfection at the Skinner water treatment plant. IT and Water Quality staff identified and captured requirements unique to the Skinner plant to be used in ensuring that all disinfection requirements are met and accurately recorded. The software programming and enhancements to the Labsheet application were completed by in-house IT staff.

**Continued Development of the Water Quality Monitoring and Event Detection System**

- IT staff continued working on the development phase of the Water Quality Monitoring and Rapid Event Detection System project to provide real-time analysis of water quality information and to help ensure water quality reliability.
- To date, staff conducted an initial pilot of the prototype system utilizing Metropolitan data and involving key stakeholders from Water System Operations.



**Other Key Accomplishments:**

**Oxidation Retrofit Programs**




- For the Diemer Oxidation Retrofit Program (ORP), IT staff continued to review and provide comments and feedback on contractor submittals for compliance with Metropolitan’s control system/software specifications.
- For the Weymouth ORP, IT staff continued to participate in final design coordination meetings and review preliminary design documents, specifications, hardware, and software requirements as they related to control systems.

**Provided IT Services to Other Key Water Quality-Related Projects and Programs**

- During the period, IT staff provided control system design review, programming, technical support, system start-up support, and participated on a number of water quality-related capital projects that included:
  - Jensen Solids Handling
  - Diemer Fire and Potable Water Pump Station
  - Weymouth Power System Upgrade
  - Copper Basin and Gene Wash Dam Rehabilitation

Expenditures in the Improved Water Quality category were on-target for the first quarter of the fiscal year.



<p><b>Productivity / Cost Efficiency:</b></p>	<p><b>Fiscal Year 2010-11</b>  <b>Budget: \$0.22 M      Expended: \$0.24 M</b></p>
<p><b>Key Accomplishments Included:</b></p> <p><b>Deployed Software Enhancements</b></p> <ul style="list-style-type: none"> <li>IT staff continued to support WSO's mobile technology initiative to streamline maintenance operations by developing enhancements to the software used in Metropolitan's handheld units. These new enhancements decrease repair and maintenance times by providing field personnel with up-to-date parts and materials inventory and status information at their work sites.</li> <li>During the period, staff completed software enhancements for Metropolitan's mobile handheld units. In September, WSO approved the enhancements and they were implemented.</li> </ul> <p><b>Conducted iPad Evaluation</b></p> <ul style="list-style-type: none"> <li>Metropolitan is evaluating iPads as a cost-saving alternative solution to using laptops for board members to view board-related material. A briefing on this initiative was made to the Engineering and Operations Committee on September 13, 2010.</li> <li>The iPad evaluation was conducted in September/October 2010 and will be followed by a final recommendation to management, based on input from the pilot participants.</li> </ul> <p><b>Information Technology Section Award Recognition</b></p> <ul style="list-style-type: none"> <li>Metropolitan submitted two entries for consideration by the National Association of State Chief Information Officers (NASCIO) organization. Metropolitan's submissions were entitled "Water Information System (WINS): Improving the Efficiency" and "Transparency of Water Billing and Smart Operations (SMART Ops): Simulating the Behavior of a Large and Complex Water System to Manage Risk." Both entries were evaluated in their respective categories by the California State CIO's Office and selected to represent California in the national NASCIO award competition. In August, the Awards Committee of NASCIO completed its review of nominees for the 2010 Recognition Awards and selected Metropolitan's entry on Water Information System (WINS) as a finalist.</li> </ul>	  



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- Recently, Metropolitan's Corporate Resources Group was recognized by the Municipal Information Systems Association of California (MISAC) and given the 2009/10 Award for Excellence in Information Technology Practices. MISAC presents this award to recognize organizations that have outstanding Information Technology practices. This is the highest MISAC award that an organization can achieve.

Expenditures in the Productivity/Cost Efficiency category were generally on-target for the first quarter of the fiscal year.

